

5 PARTIAL PAGE PROGRAMMING OF MULTI LEVEL FLASH

ABSTRACT OF THE DISCLOSURE

A method and apparatus for partial page programming of a multi level cell flash memory. In a multi level cell flash memory, new partial page programming information may be accessed. Information previously stored in the memory may be accessed. New and previous information may be combined in a page buffer of a flash device. Optionally, new and previous information may be combined in a memory external to the flash device. The combined information may be used to program the cells of a flash memory. A standard programming and verification method may be used to program the combined information into the cells of a flash memory. In this novel manner the benefits of partial page programming may be realized for multi level cell flash memory devices.